Bambauer AgLand Appraisal
Appraisals · Consultations · Market Studies

Richard M. Bambauer

4101 St Rt 105
Westport, Washington 98545

5137 N. Van Ness Boulevard
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559.994.3356

BambauerAg@msn.com

SENT VIA ELECTRONIC MAIL

May 21, 2013

Tim Crose
Assistant Director
Pacific County Department of Community Development
1216 Robert Bush Drive
P.O. Box 68
South Bend, Washington 98586

Re: Kindred Island Soil Tests

Dear Tim:

As you requested, enclosed is a copy of our current April, 2013 soil test results on the Kindred Island Property. I am also enclosing a copy of the prior, March, 2012 soil test.

The current soil test was conducted in a similar manner as method utilized by the U.S. Army Corps of Engineers utilized during our site inspection which you attended. Sample 2 followed the same line the US Army Corp dug pits during their inspection.

The March of 2012 soil test was conducted by Pacific County NRCS which I was present. A number of core samples were taken, mixed together to arrive a test sample. The NRCS took samples at depths of 3 feet, not in the upper root zone.

A grid pattern was set up in straight lines, taking soil probe samples every 100 feet. These samples were collected in a clean bucket and mixed together. For the fields identified in samples 1, 2 and 3, a total to eight soil probe cores were mixed together to arrive at a test sample. The soil probe samples were taken at the upper 18 inches of the soils in the root zone.

Fields K4, K5, K6 and K8 were the fields primarily utilized where the large Ocean Gold trucks off-loaded shells in 2012 and 2013.

Fields K1, K2 and K3 are the fields originally utilized in 2011. These fields have been utilized by using our dump truck to off-load shells, consisting primarily of crab shell backs during crab season and shrimp in the summer months. We do not utilized the Ocean Gold trailers on these fields. A total of twelve (12) probe samples were taken at 100 foot intervals and mixed together to arrive at a sample.

The soil testing program is set up to complete bi-annual soil tests, at the beginning of April each year and in the fall, prior to heavy rains in October of each year. We will utilize the same grid program, taking a number of core samples at 100 foot intervals in the upper root zone (18 inch depths). The laboratory utilized, Dellavalle Laboratory in Fresno, California, would with of the largest agricultural produces in California. They specialize in working with large dairy operators with consulting on dairy wastewater nutrient management plans. The Eco Farms shell operation is not nearly as complicated as a dairy nutrient management plan, however, the concept is the same, to protect for over applying nutrients into the soil to protect the underlying water table. I have working with this company for some 25 years in my appraisal and real estate brokerage companies in California.

These bi-annual soil tests will demonstrate the actual agronomic rates on the property, after the cropping pattern nutrient uptake. For small grains grown, various University fertilizer guidelines indicate approximately 50 pounds of nitrogen is required for crop breakdown.

Don Tapio, WSU Farm Advisor, has indicated WSU would like to utilize a portion of the property in the fall of 2013 and spring of 2014 to plant various grains and dry beans as test plots on the property. Don Tapio has expressed an interest in some side by side comparisons on fields with and without having shells applied for the WSU studies.

I believe that by this time next year, we will have a very good handle on the true site specific agronomic rates on the various soils on the property, which will be backed up the WSU field trials as well as our own cropping history in 2013.

Our 2013 spring plantings have been delayed as a result of the interference of a number of governmental agencies which has resulted in Pacific County revoking the legal Land Application Permit. Resources have had to be utilized to defend unsubstantiated claims and acquisitions rather than planting fields.

If you have any questions, or need any additional information, please do not hesitate to call.

Sincerely,

Bambauer AgLand Appraisal

Richard M. Bambauer

RB/rb
Enclosures

cc: Terry and Vicki Larson
Craig Holley
Faith Taylor-Eldred

Exhibit "A"

March 2012 Soil Test

DATE : March 02, 2012 FAX TO CLIENT: 360/875-6260
REPORT: S3489 M
CLIENT: PACIFIC CONSERVATION DISTRICT
GROWER: BAMBAUER, RICHARD
SAMPLED: CATHY PORTER

Agri-Check
A Division of AgSource Cooperative Services
323 Sixth St. • P.O. Box 1350 • Umatilla, OR 97882
Ph: 541-922-4894 • 800-537-1129 • Fax: 541-922-5496

SOIL ANALYSIS REPORT

Lab No.	Depth Foot	pH	S.Salt mmhos	O. M. %	P ppm	K ppm	Ca meq	Mg meq	NITROGEN NO3 #/A	NITROGEN NH4 #/A	S ppm	B ppm	Zn ppm	Mn ppm	Cu ppm	Fe ppm	CEC meq	Na meq	Total Bases	Base Sat. %	SMP Buf.pH	MOISTURE Total %	MOISTURE Avail. Inches	TKN %	Cl ppm
FIELD:	FIELD 1 SOUTH OF DIKE																								
4711	1	5.0	0.04	1.7	34	49	0.8	0.6	5	10	5.7	0.2	0.9	7	0.1	124			1.5		6.5				
FIELD:	FIELD 2 INSIDE DIKE																								
4712	1	5.7	0.05	2.3	53	78	2.8	0.8	7	14	4.7	0.2	1.5	8	0.1	113			3.8		5.7				
FIELD:	FIELD 3																								
4713	1	5.4	0.04	2.0	11	75	1.1	0.7	4	14	5.6	0.4	0.6	9	0.2	172			2.0		6.6				
FIELD:	FIELD 4 WEST OF SLOUGH																								
4714	1	6.3	0.05	0.9	76	62	3.2	0.4	3	7	5.2	0.1	0.4	2	0.2	48			3.8		7.2				
FIELD:	FIELD 5																								
4715	1	5.2	0.10	4.0	8	258	3.6	4.8	8	19	24.1	0.8	1.3	20	1.6	381			9.1		5.9				

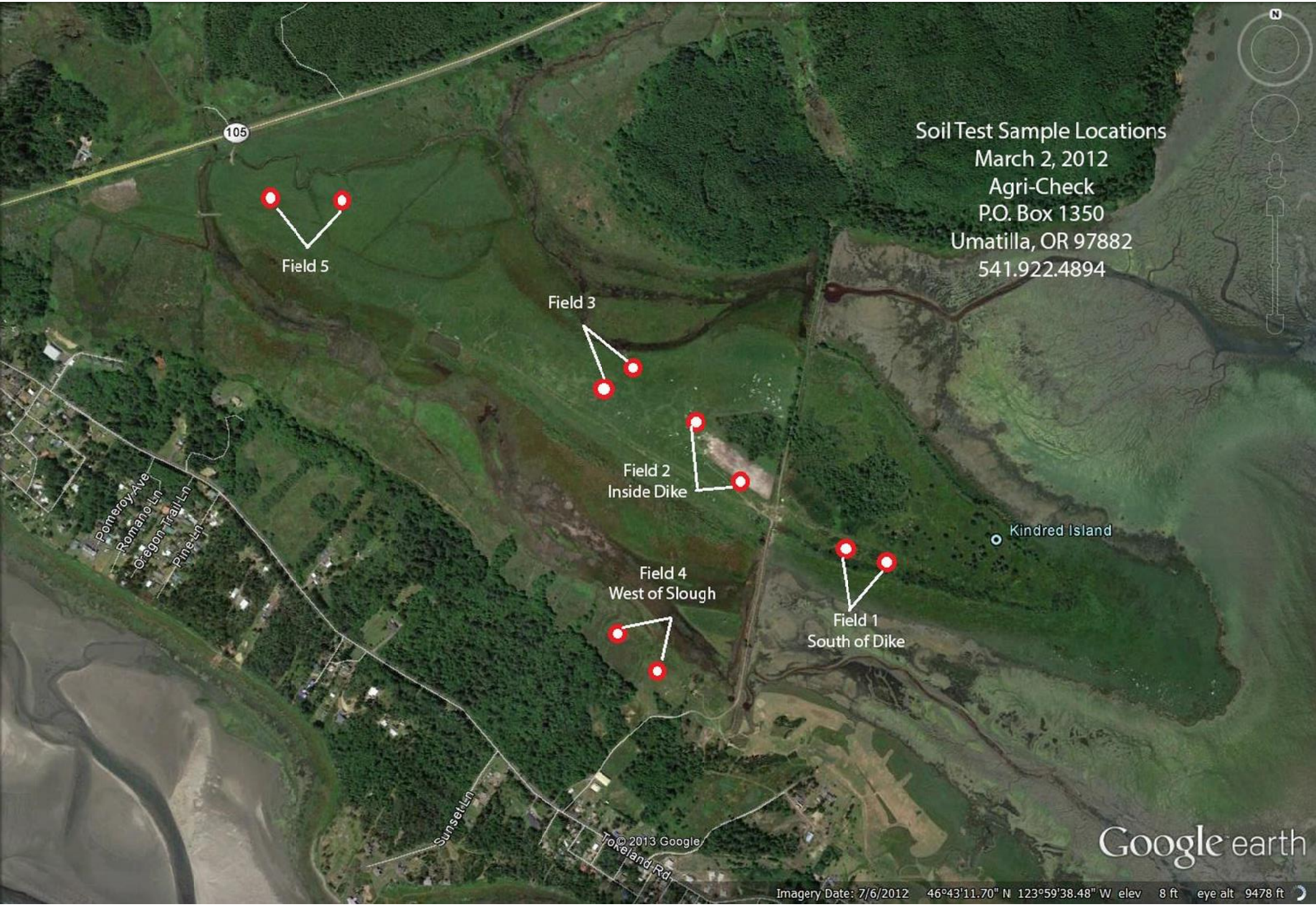
Soil Test Sample Locations
March 2, 2012
Agri-Check
P.O. Box 1350
Umatilla, OR 97882
541.922.4894
105
Field 5
Field 3
Field 2
Inside Dike
Field 4
West of Slough
Field 1
South of Dike
Kindred Island
Pomeroy Ave
Romano Ln
Oregon Trail Ln
Pine Ln
Sunset Ln
Tokeland Rd
© 2013 Google
Google earth
Imagery Date: 7/6/2012 46°43'11.70" N 123°59'38.48" W elev 8 ft eye alt 9478 ft

Exhibit "B"

April 2013 Soil Test

DELLAVALLE® Laboratory, Inc.
Chemists and Consultants

Report of Soil Analysis

1910 W. McKinley, Suite 110, Fresno, CA 93728
FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129

Salt Aire Inc
PO Box 420
Grayland WA 98595
18555
50

ID:

Lab No. 185229
Sampled Date
Submitted Date 4/16/2013
Submitted by Richard Bambauer
Reported Date 4/23/2013
Location/Project
Copy To
Fax
e-mail rick@saltaireinc.com

No.	Description	% SP	units pH	dS/m EC	meq/l Ca	meq/l Mg	meq/l Na	meq/l Cl	% ESP	T/ac-6" GR	+\- Lime	lbs/ac-6" Lime	mg/l B	mg/kg NO_3-N	mg/kg PO_4-P	mg/kg K	mg/kg Acid K	mg/kg Zn	mg/kg Mn	mg/kg Fe	mg/kg Cu	% OM
	RL--->	0.50	1.0	0.01	0.1	0.1	0.1	0.1	0.1	0.1		500	0.1	1.0	2.0	2.0	40.0	0.1	0.1	0.1	0.1	0.01
	NAPT Methods--->	S1.00	S1.10	S1.20	S1.60	S1.60	S1.60	S1.40	Calc.			S2.50	S1.50	S3.10	S4.10	S5.10		S6.10	S6.10	S6.10	S6.10	S9.20
	Handbook 60--->									Hndbk 60-22d	Hndbk 60-23a						SSSA,p5 61 mod					
1	1 East	36	8.2	0.68	5.8	1.1	0.8		<0.1		+		<0.1	5	74	46		1.0	4.5	98.3	0.5	1.48
2	2 Middle	37	7.2	1.29	9.5	2.3	1.9		<0.1		++		<0.1	33	12	57		2.1	3.6	96.5	0.7	1.62
3	2 East	39	6.5	1.06	5.7	4.2	1.6		<0.1		+		<0.1	28	52	58		1.3	2.7	284	0.9	1.71
4	3 West	33	6.6	1.42	8.7	2.0	1.8		<0.1		+		<0.1	44	73	67		1.7	4.2	111	0.7	1.49

DELLAVALLE® Laboratory, Inc.
Chemists and Consultants

Report of Soil Analysis

1910 W. McKinley, Suite 110, Fresno, CA 93728
FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129

Salt Aire Inc
PO Box 420
Grayland WA 98595
18555
50

ID:

Lab No. 185229
Sampled Date
Submitted Date 4/16/2013
Submitted by Richard Bambauer
Reported Date 4/23/2013
Location/Project
Copy To
Fax
e-mail rick@saltaireinc.com

No.	Description	--- Ammonium Acetate --- Extractable Cations mg/kg Ca	mg/kg Mg	mg/kg Na	--- Ammonium Acetate --- Extractable Cations meq/100g Ca	meq/100g Mg	meq/100g Na	--- Extractable Cations of Estimated CEC % K	% Ca	% Mg	% Na	Estimated meq/100g CEC	Ca/Mg Ratio	K/Mg Ratio	meq/l SO_4-S
	RL--->	1.0	6.5	5.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	NAPT Methods--->	S5.10	S5.10	S5.10	Calc.	Calc.	Calc.	Calc.	Calc.	Calc.	Calc.	Calc.	Calc.	Calc.	S1.70
	Handbook 60--->														
1	1 East	1720	81.1	18.8	8.6	0.7	<0.1	1.2	90.8	7.1	0.9	9.5	12.9	0.2	1.3
2	2 Middle	2000	108	33.5	10.0	0.9	0.1	1.3	89.4	8.0	1.3	11.2	11.2	0.2	1.6
3	2 East	1000	200	26.0	5.0	1.6	0.1	2.2	72.4	23.8	1.6	6.9	3.0	<0.1	1.8
4	3 West	983	62.9	28.4	4.9	0.5	0.1	3.0	85.8	9.1	2.2	5.7	9.5	0.3	1.1

Print | Close Window

Subject: Re: FWD: 185229 soils
From: lmount@dellavallelab.com
Date: Mon, May 06, 2013 6:44 pm
To: <rick@saltaireinc.com>

Hello Mr. Bambauer,

The conversion factor for nitrate-nitrogen (NO3-N) to pounds per acre is 2.73, so in your example it would be 13.65 lbs/ac.

Your results are only the nitrate-nitrogen portion of plant available nitrogen (PAN). There is also some ammoniacal-nitrogen (NH3-N) uptake by plants. Typically, PAN refers to the amount of nitrogen available to a plant through decomposition (mineralization) of a manure or crop residue source into NO3-N and NH3-N. In soil, bacteria convert NH3-N into NO3-N.

If you have any further questions or concerns, please let me know.

Sincerely,

Lacey Mount

Lacey L. Mount, D.P.M.

CCA#364694

PCA# 128730

559-351-2741 mobile

lmount@dellavallelab.com

Dellavalle Laboratory, Inc.

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